

(a) [mixing a] binding at least one liquid pesticide [including at least one fungicide, with] to a plurality of carrier particles [selected from the group consisting of carbon black and hydroxyapatite, said carrier modifying a release rate of said pesticide from said controlled release device wherein the pesticide is bound to the carrier in a pesticide carrier mix,] to produce a plurality of pesticide-containing carrier particles; then

(b) mixing [combining] the [pesticide] pesticide-containing carrier particles [mix] with a hydrophobic thermoplastic polymer to produce a mixture of pesticide-containing carrier particles and said polymer; and

(c) forming said mixture of pesticide-containing carrier particles and the polymer to produce said control release device having pesticide-containing carrier particles dispersed throughout the polymer.

2. (Amended) The method as recited in claim 1, wherein the at least one pesticide is in a [liquid] solid form, said method further comprising the step of heating at the least one solid pesticide to convert it into liquid form prior to said binding step.

3. (Amended) The method as recited in claim 1, wherein said [combining is by mixing the pesticide carrier mix with a pre-polymer thereby forming said hydrophobic polymer upon polymerization or curing] hydrophobic polymer has hydrophobicity of less than about 13 on either the HLB or solubility parameter scale.

4. (Twice Amended) The method as recited in claim 1, wherein said forming [combining is by] comprises encasing said [pesticide carrier mix] mixture as an inner part with [an outer part of] said hydrophobic polymer.

6. (Amended) The method as recited in claim 1, wherein said device releases said pesticide at a release rate is in the range between 4.0 $\mu\text{g}/\text{cm}^2/\text{day}$ to 40.4 $\mu\text{g}/\text{cm}^2/\text{days}$ measured using 1/8 inch thick one inch squares [said hydrophobic polymer is selected from the group consisting of thermoplastic polymers, thermoset polymers, elastomeric polymer and copolymers thereof].

7. (Amended) The method as recited in claim 1, wherein said hydrophobic thermoplastic polymer is selected from the group consisting of low density polyethylene, high density polyethylene, vinyl acetate, [urethane], polyester, silicone, neoprene, isoprene and combinations thereof.

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8. (Amended) The method as recited in claim 1, wherein at least one said pesticide has [a low] vapor pressure in the range from 1 nPa to 100 mPa.

9. (Amended) The method as recited in claim 8, wherein [said low vapor pressure pesticide is combined with a high density pre-polymer] the polymer is a high density polymer.

10. (Amended) The method as recited in claim [9] 42, wherein said high density pre-polymer is [forms a high density polymer selected from the group consisting of] high density polyethylene.

12. (Amended) The method as recited in claim [11] 42, wherein hydrophobic thermoplastic polymer is a low density hydrophobic pre-polymer.

13. (Amended) The method as recited in claim [12] 42, wherein said [low density] pre-polymer is selected from the group consisting of [urethane], polyester, low density [hydrophobic] polyethylene, and combinations thereof.

14. (Amended) The method as recited in claim 13, wherein said [fungicide] pesticide is selected from the group consisting of tri-chloronitromethane under the tradename Chloropicrin, a mixture of methylisothiocyanate and 1-3 dichloropropane [under the tradename Vorlex], sodium N-methyl dithiocarbamate [under the tradename Vapam], 2,3,5,6 - tetrachloro - 1,9 - benzoquinone under the tradename Chloronil, calcium cyanamide, biphenyl, copper naphthenate, dichlorophen, fentin hydroxide and combinations thereof.

15. The method as recited in claim 1, wherein said [fungicide] pesticide is selected from the group consisting of byphenyl, dichlorphen, Chlorpicrin, and combinations thereof.

16. (Amended) A method of preventing the decay and deterioration of wooden objects in contact with soil caused by the invasion of pests, said method comprising the steps of:

(a) [mixing] binding a pesticide including at least one fungicide, said pesticide being in liquid form, to [with

(b)] a carrier, selected from the group consisting of carbon black and hydroxyapatite, to produce [said carrier modifying a release rate of said pesticide from said controlled release device, forming] a pesticide-containing carrier [pesticide carrier mix,] ;

[(c)] (b) mixing [combining] the [pesticide] pesticide-containing carrier mix with a hydrophobic thermoplastic polymer [thereby forming] to produce a mixture of the pesticide-containing carrier and the polymer;

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[(b)] (c) forming the polymer in said mixture into a continuous polymeric matrix with pesticide-containing carrier dispersed therein to produce a controlled release device, the concentration of the pesticide being sufficient to provide a predetermined release rate through said polymer and sufficient to provide a minimal effective level to prevent pest intrusion for a predetermined period of time; and];

[(b)] (d) placing the controlled release device [proximate] in contact a [the] wooden object; and,

(e) allowing the pesticide to release from said device into the structure of said wooden object, the release rate of the pesticide being sufficient to produce a zone in said wooden object having a concentration of the pesticide above a minimal effective level necessary to prevent pest intrusion.

18. The method of claim 16 wherein zone includes [the minimal effective level is maintained throughout] the whole wooden [structure] object.

19. The method of claim 16 wherein [the minimal effective level is maintained in a] the zone of the wooden [structure] object includes less than the entire wooden object.

20. (Amended) The method of claim 16 where the hydrophobic polymer is selected from the group consisting of [thermoset polymers, thermoplastic polymers, elastomeric polymers, thermoplastic polymers, elastomeric polymers, and copolymers thereof].

21. (Amended) The method as recited in claim 16, wherein [proximate is] the controlled release device is placed within said wooden object.

22. (Amended) The method as recited in claim 16, wherein [proximate is] the controlled release device is placed in contact with on an exterior surface of said wooden object.

23. (Amended) The method as recited in claim 16, wherein [proximate is touching or in physical contact with said wooden object] at least one pesticide is a fungicide.

24. (Amended) A controlled release device for releasing a pesticide, comprising:

(a) a pesticide [including at least one fungicide bound to,];

24. (Amended) A carrier, said pesticide being bound to said carrier so as to modify [selected from the group consisting of carbon black and hydroxyapatite, said carrier for modifying a release rate of said pesticide from said controlled release device, thereby defining a carrier bound pesticide,];

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(c) said carrier bound pesticide enveloped within a thermoplastic hydrophobic polymer.

27. (Amended) The controlled release device as recited in claim 26, said device being in the form of a rod, pellet, sleeve or sheet.

28. The controlled release device as recited in claim [27] 26, wherein said device is in form of a sheet, further [comprises] comprising a second sheet in contact with said device for retarding or preventing photodegradation of said pesticide.

29. (Amended) The controlled release device as recited in claim 28, wherein said second sheet is made of a polymer selected from the group consisting of metallized polyethylene terephthalate [(Mylar)], poly(vinylidene chloride) [(Saran)], and combinations thereof.

Add the following new claims:

30. The method claimed in claim 1 wherein the forming step is performed by injection molding.

31. The method claimed in claim 1 wherein the at least one pesticide is a fungicide.

32. The method claimed in claim 31 wherein the at least one pesticide further includes a pesticide for eliminating wood boring insects.

33. The method claimed in claim 1 further comprising the step of shaping said mixture of pesticide-containing carrier and the polymer into a pallet.

34. The method claimed in claim 1 further comprising the step of shaping said mixture of pesticide-containing carrier and the polymer into a sheet having a thickness in the range from 60 mil to 120 mil.

35. The method claimed in claim 1 further comprising the step of shaping said mixture of pesticide-containing carrier and the polymer into strips.

36. The method claimed in claim 1 wherein said at least one pesticide comprises from about 5 to about 30 weight percent of said mixture, said carrier comprises from about 3 to about 30 weight percent of said mixture and said polymer comprises from about 40 weight percent of said mixture to about 92 weight percent.

37. The method of claim 1 wherein said hydrophobic polymer has hydrophobicity of less than about 10 on either the HLB or solubility parameter scale.

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38. The method of claim 1 wherein said hydrophobic polymer has hydrophobicity of less than about 8 on either the HLB or solubility parameter scale.

39. The method of claim 1 wherein the carrier is carbon black.

40. The method of claim 1 wherein the carrier is hydroxyapatite.

41. A method of making devices for controlled release of at least one pesticide useful for retarding or preventing decay or deterioration of a wooden object by pests, said method comprising the steps of:

(a) binding at least one liquid pesticide to carrier particles to produce pesticide-containing carrier particles; then

(b) encapsulating said pesticide-containing carrier particles with a thermoplastic hydrophobic polymer to produce a plurality of said devices.

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42. a method of making a device for controlled release of at least one pesticide useful for retarding or preventing decay or deterioration of a wooden object by pests, said method comprising the steps of:

(a) binding at least one liquid pesticide to carrier particles to produce pesticide-containing carrier particles;

(b) mixing said pesticide-containing carrier particles with a thermoplastic pre-polymer to produce a mixture;

(c) polymerizing said pre-polymer in said mixture to form a continuous polymeric matrix with said pesticide-containing carrier being dispersed throughout said matrix, said matrix being hydrophobic.

REMARKS

The amendment to the specification is resubmitted in the format suggested by the Examiner in the Office Action. The Examiner is respectfully requested to enter the amendment.

Claims 3, 7, 12-14, 18 and 19 have been amended to obviate the rejections under 35 U.S.C. § 112, ¶¶ 1 and 2. In view of the amendment, the Examiner is respectfully requested to withdraw the rejection.

The rejection of claims 1-4 and 6-29 for double patenting over claims and disclosure of the copending Application Nos. 08/350,432 and 08/484,967 are respectfully traversed.